Virginia Saltwater Development Fund
Evaluation of a Proposal for the Development of a Research or Data Collection Project

Project Number: 0606-10 **Date: August 2006**

Title: J) Submerged Aquatic Vegetation (SAV) as essential fish habitat in lower Chesapeake Bay: Linking variation in SAV, forage animal production, and sportfish abundance.

> "The Virginia Saltwater Recreational Fishing Development Fund is to be used solely for the purpose of conserving and enhancing finfish taken by recreational anglers, enforcing laws related to natural resource conservation, improving recreational fishing opportunities, obtaining necessary data and conducting research for fisheries management, and creating or restoring habitat for species taken by recreational fishermen."
>
> Code of Virginia, Section 28.2-302.3

NOTE: Please read the entire scoresheet before beginning, then provide comments, and circle ( ) the appropriate score for each item. Thank You.

A. <u>Problem Description and Resolution (20 points)</u>

1. Comment on the adequacy of the problem description, background information, knowledge of available literature/data sources, and anticipated benefits.

The problem of a lack of information on the underlying food web linkages in seagrass habitats in various parts of the Bay and their effects on differing production was identified. The authors proposed to address this issue by identifying and quantifying those linkages in 2 selected seagrass habitats, and use a modeling approach to identify potential causes of observed production differences.

The authors propose to focus on a bottom up approach, keying in on invertebrate production and diversity. They will then relate differences in invertebrate production and species composition to the abundance of fish predators.

2. Describe your views on the conceptual approach to solve the problem.

This project focuses on an intermediate level of production in seagrass beds (invertebrates) and when combined with ongoing projects at lower and higher trophic level can provide a detailed picture of the food web structure of seagrass beds in Chesapeake Bay. By focusing on a missing portion this project will increase the overall knowledge of seagrass habitats.

Using a combination of gut content analysis and stable isotopes to examine food web linkages is a good approach. When combined with quantitative estimates of abundance of the various prey and predators, a modeling approach can point to the important linkages and highlight differences between beds.

SCORE (Circle one)	**Poor**				**Excellent**
	0	**5**	**10**	**15**	**(20)**

B. <u>Soundness of Project Design/Technical Approach (25 points)</u>

1. Is there sufficient information to technically evaluate the proposal?

Yes, the authors included adequate information

2. What are the strengths/weaknesses of the project design (thoroughness, practicality, methods, integration with other work, etc.)?

Sampling methods and design for objectives 1 and 3 as well as the gut content analysis in objective 2 are well described and appropriate. I'm concerned with a lack of samples size for the stable isotope portion of objective #2. It will be very difficult to discern any significant differences with such small sample sizes (n=5 per organism).

A strength of this research is that it goes into detail at the invertebrate level of the seagrass bed food web were data is lacking. It is however highly dependent on other funding to cover the lower and upper trophic levels in order to provide an overall picture.

SCORE (Circle One)	**Poor**					**Excellent**
	0	**5**	**10**	**15**	**(20)**	**25**

C. Project Management and Experience/Qualifications of Personnel (15 points)

What is your opinion of the experience and capabilities of the Principal Investigator(s) to manage and conduct the work, the availability of facilities, and education and experience of assisting personnel.

The authors are well qualified and capable, and VIMS facilities are well suited to performing this work.

SCORE (Circle one)	**Poor**			**Excellent**
	0	**5**	**10**	**(15)**

D. Project costs (15 points)

Is the budget realistic and reasonable? Indicate any unreasonable costs.

The budget is appropriate for the work proposed.

SCORE (circle One)	**Poor**			**Excellent**
	0	**5**	**10**	**(15)**

E. Value of the Project to Fisheries Managers (25 points)

Do you believe the results of this project will further management of the species described? Will the results be useful to managers?

This study should result in a better understanding of the food web structure and function in seagrass beds in Chesapeake Bay. This is valuable information and will be needed in the future as pressure continues to manage fisheries more on an ecosystem basis than the traditional individual species basis. The analysis proposed here will go a long way toward identifying what factors are the most important in seagrass beds in providing essential fish habitat.

SCORE (circle one)	**Poor**					**Excellent**
	0	**5**	**10**	**15**	**(20)**	**25**